

Level 1 Validation Certificate

This document verifies that the Level 1 Validation process was completed. The session details and audit review outcomes are included here.

This certificate is required for submission – alongside the Level 1 validated water audit software file – to the California Department of Water Resources.

Call Date: 7/25/2019

Water Supplier

Supplier Name: City of Sacramento

Supplier Participants:

Don A. Conner, Instrument Technician II

Jon Conover, Utilities Operation and Maintenance Supervisor

Brett Ewart, Senior Engineer

Julie Friedman, Program Specialist, Environmental Services Manager

William Granger, Program Specialist, Water Conservation Administrator

Eric Halverson, Senior Department System Specialist

Diane Naranjo, Administrative Analyst

Additional Audit Contributions:

Roshini Das, Program Manager, Sustainability

Richard Glenn, Utilities Operation and Maintenance Supervisor

Administrative Support from Student Interns:

Jessica Parrish (Graduate Student Intern)

Tim Katkanov (Student Intern)

Validator

Validator: Kate Gasner,
Water Systems Optimization

Validator Qualifications: Water Audit Validator Certificate from
the AWWA California Nevada Section

Key Audit Metrics

Data Validity Score:	60	
ILI:	4.7	
Real Loss:	45.8	gal / conn / day
Apparent Loss:	11.1	gal / conn / day
Non-Revenue Water as Percent of Cost of Operating System:	1.7%	

Certification Statement by Validator

This water loss audit report has been Level 1 validated per the requirements of California Code of Regulations Title 23, Division 2, Chapter 7 and the California Water Code Section 10608.34.

All recommendations on volume derivation and Data Validity Grades were incorporated into the water audit. ☒

Level 1 Validation – Water Supplier Confirmation

This document confirms participation in and endorsement of the Level 1 Validation as completed.

This acknowledgement is required for submission – alongside your Level 1 validated water audit software file – to the California Department of Water Resources.

Water Supplier Name:	City of Sacramento Department of Utilities
Water Supplier Public Water System ID:	3410020
Water Audit Period:	Fiscal Year 2019 (07/01/2018 – 06/30/2019)

Water Audit & Water Loss Improvement Steps

Steps taken in the audit period timeframe to increase data source accuracy, reduce real losses, and/or reduce apparent losses, as informed by the water audit.

- Accelerated water meter installation program (by 2020-2021);
- Increased technical advisory review with Water Loss Committee, DMA Committee and Utilities' Team;
- Improved understanding of Supply Meter Master Meter Error. Changed calibration record-keeping to coincide with fiscal year audit period;
- Established ongoing mechanisms for customer meter accuracy testing, active leakage control and infrastructure monitoring. Improved data reliability and evaluated cost-effective interventions for water and revenue loss recovery. Implemented and completed a Pilot District Metered Area (DMA) Program under a DWR Water-Energy Grant for cost-effective interventions by
 - (1) monitoring and evaluating 18 percent more of the City's system to assist crews and meet more aggressive leak detection survey targets;
 - (2) setting thresholds for leak detection in each DMA based on cost/benefit of intervention;
 - (3) providing for ongoing detailed data analytics of consumption and DMA relevant system hydraulics data; and
 - (4) providing field validation of annual system wide audit results on a sample portion of the system increasing stakeholder confidence in audit report.
- Began assembling economic business case planning for long-term needs based upon improved data becoming available through the audit process;
- Participated in stakeholder meetings (SWRCB and DWR) and shared updated information/compliance requirements with team.

Certification Statement by Water Supplier Executive:

This water loss audit report meets the requirements of California Code of Regulations Title 23, Division 2, Chapter 7 and the California Water Code Section 10608.34 and has been prepared in accordance with the method adopted by the American Water Works Association, as contained in their manual, *Water Audits and Loss Control Programs, Manual M36, Fourth Edition* and in the Free Water Audit Software version 5.

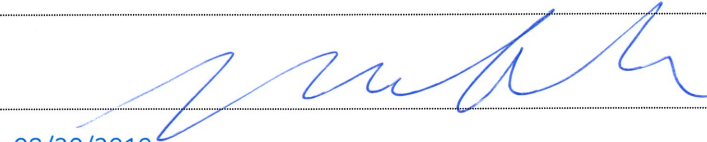
Executive Name (print):

William O. Busath

Executive Position:

Director

Signature:



Date

08/20/2019